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Education

COMMUNICATION ACROSS THE CURRICULUM

A Study Completed for Saskatchewan Education
Core Curriculum Investigation Project

Trevor J. Gambell, Ph.D.
Department of Curriculum Studies
University of Saskatchewan
Saskatoon, Saskatchewan

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A Common Essential Learning for Saskatchewan Students

Trevor J. Gambell

Department of Curriculum Studies
University of Saskatchewan
Saskatoon S7N 0W0

Curriculum Development Division
Saskatchewan Education

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Personnel from Saskatchewan Education

Members of the Common Essential Learnings Investigation Group:

Reg Fleming, University of Saskatchewan
Jack Hope, University of Saskatchewan
Joseph Malikail, University of Regina
Cyril Kesten, University of Regina
Sandra Klenz, Prince Albert School Divison No. 3
Douglas Stewart, University of Regina

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SUMMARY PAPER

Trevor J. Gambell

Department of Curriculum Studies
University of Saskatchewan
Saskatoon
Saskatchewan S7N 0W0

Curriculum Development Division
Saskatchewan Education

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COMMUNICATION ACROSS THE CURRICULUM

Language is the principle means by which all learners process experience, real and vicarious, and give meaning to it, both for themselves and for others. Language grows and develops consonant with congnition, so that in effect all teachers are language teachers (but not English teachers), and for students learning a subject is really learning the language of the subject being studied.

Communication across the curriculum might also be called language for learning; it is a cognitive-linguistic process which is the basis of all learning and understanding. As such, communication across the curriculum (CAC) has been identified as a common essential learning K-12 for all Saskatchewan students, and CAC skills are to be identified, developed and used in all required areas of study in Saskatchewan schools.

CAC applies to every facet of learning; it is across the curriculum in the sense that language is the core of learning, understanding, and expression in all subject areas. It is across the curriculum also in that CAC has as much relevance in kindergarten as in grade twelve, except that in kindergarten and the early years learning is language, while during the secondary years learning is through language. As subject areas become differentiated and then specialized during elementary, middle, and secondary levels, the demands on language become differentiated and increasingly specialized. To the extent that students and teachers are able to understand, learn and apply these differentiated and specialized language uses, known as subject registers, students are either more or less successful in school.

CAC, then, is about language, not English. English has its content as do other subject areas, and includes literature, syntax (grammar), composition, media, and drama. CAC policy does not ask that all teachers become English teachers. What it does request, first, is that all teachers understand the role that language plays in their respective subject areas. It attempts to create awareness and to change and/or develop favourable attitudes among students and teachers toward language and the role it plays in learning.

Language development of students in the subject areas becomes a shared responsibility of all teachers. Language includes the areas of listening, speaking, reading, writing, reviewing and observing, and learning takes place through all of these modes. One aspect of CAC is the realization that language for learning must be given at least as much emphasis, and more, as is currently given language for testing and evaluation. The process of learning through language includes awareness that students' own language in the group process of oral languaging is a potent force for learning, and that knowledge of the writing process is a key to learning through writing.

The recommendations which follow are intended to guide Saskatchewan Education and curriculum developers in each of the

required areas of study as they write curricula and implement them in Saskatchewan schools. To further assist educators scope and sequence charts have been prepared which display language skills, processes and activities appropriate for the elementary, middle and secondary levels in all required areas of study.

RECOMMENDATIONS

These recommendations deal with the provision of information and the implementation of CAC processes to teachers in Saskatchewan

1. That a study be conducted to determine how much time teachers spend teaching language skills in content areas, and what particular skills are taught.

2. That a teacher information guide be produced describing CAC as a Common Essential Learning K-12 giving the rationale and scope of CAC in the Required Areas of of Study. This guide to be distributed to all Saskatchewan educators.

   a) That a significant section of the information guide deal with the role of expressive talk in the classroom in a variety of contexts with examples provided in all the Required Areas of Study.

   b) That a significant section of the information guide deal with the role of expressive writing in the classroom in a variety of contexts for different purposes and audiences, with examples provided in all the Required Areas of Study.

   c) That a section of the information guide deal with the group process for language and learning.

3. That implementation of CAC as a Common Essential Learning follow the plan described in the companion paper Implementing Communication Across the Curriculum in Schools: A Common Essential Learning.

4. That all teachers in Saskatchewan be provided with an inservice program with follow-up stages annually for a period of at least three years where they participate in CAC activities in a workshop setting led by knowledgable personnel.

5. That videotape programs of CAC in classroom settings at various levels in a variety of content areas be made available for teacher inservice sessions with appropriate follow-up discussion and activity led by knowledgable personnel.

6. That a document be produced and disseminated to all educators in Saskatchewan on the implications for evaluation of student learning consistent with CAC as a Common Essential Learning in the Required Areas of Study.

7. That Saskatchewan Education attempt to solicit the professional endorsement and assistance of the Saskatchewan Teachers'

Federation, the League of Educational Administrators and Directors of Saskatchewan (LEADS), the Saskatchewan School Trustees' Association and other educational associations in order to better implement CAC in the schools of Saskatchewan.

8. That Saskatchewan Education undertake a public awareness campaign to educate parents of school children of the meaning, intent, and implications of CAC.

9. That Saskatchewan Education undertake or contract research projects to monitor the progress and success of CAC implementation at all levels in all subjects areas over a ten year period initially, consistent with the evaluation policy emanating from Recommendation #5.

10. a) That Saskatchewan Education stress that the most effective implementation of CAC occurs at the school level where teachers identify language needs and plan and implement CAC policy to address these.

    b) That all CAC inservice activities follow the above premise.

11. a) That resource centres and the policy that encourages resource-based learning be perceived as vehicles in the implementation of CAC.

    b) That this link be acknowledged and strengthened through inservice activity.

This summary paper is a synopsis of a longer paper entitled Communication Across the Curriculum: A Common Essential Learning for Saskatchewan Students. The longer paper describes CAC in detail, and provides the scope and sequence charts previously mentioned. The longer policy paper is available through the Curriculum Development Division of Saskatchewan Education.

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INTRODUCTION

Program Policy Proposals (1986, January) describes common essential learnings, of which Communication Skills is one, as a set of "skills, attitudes, values, and cognitive abilities" which are "considered central to meeting the goals of education through a core program" (p. 11).

> The purpose of common essential learnings is to provide students with generic skills, processes, values, and cognitive abilities which can be applied in a wide range of settings and situations. They are intended to be relevant for each student, no matter what the student chooses to do beyond secondary school. (p. 11)

The development and enhancement of communication skills and abilities are considered a primary purpose of education. Program Policy Proposals (PPP hereafter) describes the skills as including speaking, reading, writing, listening, viewing, and other forms of non-verbal communication (p. 12). Although communication skills will remain primarily the responsibility of the English Language Arts area of required areas of study, PPP considers them applicable to all courses and programs in the school, and proposes that all teachers share the responsibility for application and reinforcement.

If communication skills as a Common Essential Learning for all students K-12 are to be generic in nature and are to equip students for life beyond grade twelve, they need to be general in scope and attainable by all students. Another aspect of communication skills is that they be applicable to all courses and programs, and that all teachers share responsibility for them.

In developing a scope and sequence chart of communication skills to meet the above two aspects it has been decided to use a matrix system of communication features forming the rows and the six required areas of

study forming the columns. For the required area of English Language Arts readers are referred to the separate document that articulates the relationships between Communication Across the Curriculum as a Common Essential Learning and Language Arts as a Required Area of Study.

This document is titled Communication Across the Curriculum K-12 rather than Communication Skills. This change in title from Communication Skills as used in PPP is deliberate; the next section of this document describes why Communication Across the Curriculum (CAC) is the preferred descriptor for this Common Essential Learning. Saskatchewan Education's statement on core curriculum (Policy Direction for a Core Curriculum, March, 1987) referred to Communication as the Common Essential Learning, affirming the direction taken in this document. Following this redefining is a section which provides a rationale for CAC K-12, then the scope and sequence outline, followed by the role of the teacher, recommendations, a bibliography and references.

COMMUNICATION ACROSS THE CURRICULUM

The 1980s and beyond have been described as the "Information Age," an age dominated by an abundance of information and communications technology. Students being educated in this "age" need to develop the skills and values to handle the vast amounts of information available to them (Saskatchewan Education, 1985, December). Students will need to be able to distinguish between different uses for language for different purposes and audiences, and to critically evaluate language. In short, language needs to be conceived of as a communicative medium rather than a body of skills.

If we consider language as being concerned primarily with

communication skills we risk the temptation to focus on functional literacy, and end up considering communication skills in terms of training in limited, limiting, and even superficial skills.

> An emphasis on communication is simply inadequate. To command one's language requires one to develop powers of reflection and interpretation, of critical appraisal of oneself and one's fellows, of making thoughtful and defensible value judgments. (McCann, 1985, p. 57)

English Language Arts as a subject has no fixed body of knowledge. English Language Arts, like mathematics, science, or social studies embodies content which constantly changes as new knowledge is added. The body of literature available in English Language Arts changes continuously, and new theories of grammar challenge existing knowledge of structure. We also know that a body of knowledge for an English Language Arts school curriculum is different to that for a teacher education curriculum. Teachers need to have different knowledge of language to that of their students. However, in order to create a rationale for teaching the English language arts, grammar and mechanics (spelling, punctuation, phonics) have been traditionally accepted as discrete content or skills for instruction.

In 1975 the recommendations made by the committee in their report A Language for Life, known as the Bullock Report (Bullock, 1975), began to shift thinking from language as content to language as process, arguing that mastery of language results from employing language in all subject areas and in a variety of situations, not from receiving instruction in its mechanics.

In order to avoid a reductionist concept of discrete communication skills that the term "communication skills" might engender, this paper will employ the term Communication Across the Curriculum (CAC) to better

portray a focus on language as process, on the interrelationship between language and thought, and on the centrality of language to learning in all the required areas of study.

LITERACY AS A COMMON ESSENTIAL LEARNING

The term 'literacy' is a universally-applied one when curriculum developers in all areas of the world set about establishing priority areas for learning. Largely because of its universality as an essential learning for educational, vocational, economic and political empowerment there is the problem of defining it in terms of specific skills that are not contextually constrained. Thus literacy has been most commonly defined in a cultural context, and in terms of what it enables the individual to do in society. In this pragmatic setting it is usually described as functional literacy. The most widely-used definition of functional literacy is that developed by UNESCO (1963):

> A person is literate when he has acquired the essential knowledge and skills which enable him to engage in all those activities in which literacy is required for effective functioning in his group or community, and whose attainment in reading, writing and arithmetic make it possible for him to continue to use these skills towards his own and the community's development and for active participation in the life of his country. (in Bourke, et al., 1981)

By thinking of literacy as functional in particular contexts for particular purposes and for particular audiences there is the recognition that functional literacy is relative, not absolute. Functional literacy is related to the milieu in which people find themselves and in which they variously blend during the course of their daily doings. Thus a functionally literate person in some school settings may be functionally illiterate in certain jobs. A public educational system cannot create

graduates who are functionally literate in a universal vocational sense any more than it can produce graduates who are technically capable of undertaking any trade without further and specialized training. Literacy is a lifetime undertaking because it is contextualized, and thus is contributed to by all realms of society including schools, government, the professions, commerce, and industry.

Literacy cannot be reduced to a set of skills since skills are different in different cultures, in different milieus within a culture, and in different situations in which the individual finds himself or herself within a milieu. What does tend to be universal is the ability to extract information from messages in different modes (oral, written, gestural, pictorial, visual) and to express ideas, feelings, and thoughts about such messages. Broadly defined, "literacy is the mastery of specific mental (emphasis mine) skills that are cultivated in response to the specific demands of coded messages" (Salomon, in Robinson, 1983, p. 10). Literacy is the ability to participate fully in a set of social and intellectual practices.

For educational purposes we need to define the various milieus - occupational, social, and intellectual settings - in which our students will be expected or may wish to function, then define the skills that they will need in each of the settings. What kinds of skills give access to school learning? to learning in the humanities? in the natural sciences? In the context of this policy document the kinds of linguistic abilities that give access to school learning is our concern.

Literacy and CAC

The premise of functional literacy within the context of the culture

of the school is that a literate student is one who may gain access to information and transmit it to others. Note the conditional verb 'may'. The school's contribution to the literate graduate is one of ensuring his or her capability to access information and transmit it in different situations to different audiences for different purposes. However, the school cannot guarantee that the graduate will exercise his or her capability in any or all situations, for any or all possible audiences, and for any or all purposes. Personal preference, bias, prejudice, motives, loyalties, economic condition, perceived or real social status, morals, and ethical principles all influence the exercise of literacy.

In the culture of the school one might construe a hierarchy of mental operations from which literacy emerges, develops, extends, and specializes. One such taxonomy appears below:

1. the ability to comprehend a code (language): to make sense of graphemes and lexical items;
2. the ability to derive information from that code;
3. the ability to derive personal, social, cognitive meaning from the information derived;
4. the ability to act on such meanings;
5. the ability to make inferential and other cognitive structures from the meanings acquired in order to find new meanings. (adapted from Robinson, 1983, p. 16)

One might add that a prerequisite for such a taxonomy would be the individual perception, mostly derived from the home environment, that comprehending school language fulfills a purpose or meets a need for that individual.

As one moves up this hierarchy of mental operations, one moves into the realms of separate academic disciplines. When students need to learn the inferential structures of chemistry or history or literary response, they can learn them from the practitioners in those disciplines. Similarly, when students need to communicate what they have learned they

can best learn the communicative strategies and special language styles used in such communications from those who know and employ them.

Communication in the above sense places such skills in the context of a discipline, an intellectual culture. Each discipline, then, has a responsibility for initiating new members - students - into its shared culture, and that culture is circumscribed by the special language codes (called registers) through which it encodes knowledge, structure, and meaning. These registers are differentiated by linguistic features such as syntactic structures, vocabulary, word usage, and paragraph coherence and cohesion. The fact that few students are empowered by and in a discipline is often a result of their being unable to communicate through the register of the discipline. The Senate Standing Committee on Education and the Arts (1981) described such linguistic breakdown in the following words:

> ... in some schools when English was not being specifically taught, teachers would neglect reading and writing skills in order, apparently, to favour concentration on the substance of the lesson itself. That is, some teachers do not accept the importance of teaching English skills in every appropriate lesson. This deficiency is even more evident in secondary school teachers who are trained to teach specialist subjects (p. 12).

Numerous studies and enquiries such as the above point repeatedly to the cross-discipline responsibility for the development of literacy in students. The recommendations arising from another comprehensive study apply equally to Saskatchewan schools as they did in Queensland, Australia. They are:

Recommendations: School Related

1.2 That schools place emphasis on reading-to-do as well as on reading-to-learn tasks.

1.3 That schools place emphasis on the development of oral language skills in relation to problem solving situations.

1.4 That schools place emphasis on developing students' ability to work co-operatively in carrying out reading-to-do and reading-to-learn tasks.

1.5 That schools emphasize the development of reading skills in all subject areas.

1.6 That schools place emphasis on developing students' ability to write formal, technical reports.

1.7 That schools place emphasis on developing graphical literacy skills.

Literacy, CAC and Standard English

The one common essential that constitutes the linguistic culture of schools, and in which all students must exercise capability for school learning is Standard Canadian English. Though some students begin school speaking a dialect or language other than Standard Canadian English, such is the language of schools, and students must become adept users of it to take advantage of school knowledge and learnings. This does not suggest that the dialect or language that the student brings to school is devalued in any way, though it does mean that schools should not be made responsible for conducting instruction exclusively in that dialect or language.

Standard Canadian English (SCE), also called Edited English (Corder & Avis, 1979) is a version of Canadian English that is found in national and major newspapers, used by established Canadian writers, and spoken by CBC newsreaders, television journalists, and the like. It is a dialect

that has been modified by users to produce a meaning of uniformity consistent with the grammatical patterns typically used in Canadian schools and in government, commerce, and the professions. It uses a vocabulary shared by people in different places and different times. Few people consistently speak standard Canadian English; many write it. SCE, though just another available variety of English, is one of the most important. Because of its importance nationally and across dialects, it is essential that students be capable in its use.

Within SCE there are registers or levels of usage. Registers vary according to the situations in which the speakers find themselves, and are defined by purpose, audience, place, time, and subject matter. We might distinguish four levels of usage in which most students need to be capable: intimate, casual, consultative, formal (adapted from Joos, 1967). Intimate register is that of the home and immediate family and is characterized by economy of words, unfinished sentences, and high evidence of nonverbal communication. Most children come to school capable in this register. The casual register is that of conversations with friends, and personal and friendly letters. Colloquialisms exist, and sentences are not necessarily complete syntactically. Much casual language develops during the school years as new relationships form, are severed, and reform.

The consultative register is that of the classroom and of most vocations. We may more usefully call it the educational register. It is characterized by complete sentences and standard usage; colloquialisms are not appropriate. Because there is limited shared background between parties the speaker or writer needs to be explicit, and relationships among ideas must be coherent and cohesive.

The formal register, found chiefly in writing but also in formal meetings, speeches, colloquia, etc. usually occurs in discussions of specialized topics and in writing addressed to somewhat limited audiences. It is characterized by complete sentences that reflect a logical development of thought and careful planning. Language is rehearsed and finely edited. The vocabulary of formal Canadian English includes most of the general words but very few from regional dialects. This register uses the specialized vocabulary of the subject matter being discussed; it also uses a good many abstract words. Grammatical constructions tend to be somewhat longer and more complex than those found in other registers. However, good formal writing is not stilted or dull. In fact, speech and writing may be good or poor in quality in any register.

The school's function is to develop student capability in all four registers and particularly the latter two, as the former two develop largely outside of school. The formal register must be developed by teachers in all disciplines since it is so closely bound to situations of specialized usage. Standard Canadian English is particularly appropriate for the educational and formal registers. All registers can be used to move or to inform; each can be genuine and powerful; each can be used with point and precision; and each can be used with due regard for meaning.

RATIONALE

> Success in schools is largely a language matter - a matter that is, of capacity to interpret and manipulate the various patterns of discourse characteristic of the many kinds of knowledge, information and ideas schools value. (Christie, 1985, p. 21)

Schools are conventionally thought of as institutions which exist to develop abilities of many kinds - abilities to think, to speculate, to explore, to inquire, to exercise critical judgment, to discriminate, and so on. In practice these abilities tend to be discussed in curricula and in educational debate as operations which take place cognitively and in some ways independent of language. Likewise, language is often spoken and written of as an area of development as if it had a status independent of other areas of development. Rarely has language been seen to have some relationship to development in other areas.

The study of language has an unique role in the enlarging of an individual's world. Because of the close connection between language and thought, language is the basis of all learning. Students of all ages should be encouraged to use their personal language to grapple with ideas and come to terms with experience before they concern themselves with the more structured means of expression such as writing. Writing too, when taught and used as a process, helps to shape the writer's thought and to clarify the expression of ideas.

Language is a tool for thinking and learning, a symbolic system for putting ideas, both concrete and abstract, into a form in which they can be manipulated. Language is also a vehicle for communicating, a coding system for exchanging thoughts and feelings through listening and speaking, reading and writing. The application of language skills is necessary for successful achievement in all subject areas.

While students do learn in other ways, learning for the most part occurs as students use language, as they talk, listen, read, write, and observe. Hence language is central to the achievement of the aims of the total curriculum. Language and thought are interrelated in at least two

ways:

1. A person's thinking is influenced by the control he or she has over language to structure his or her past experiences.
2. A person's ability to use language is the aspect of his or her thought processes most easily discernible by outside influences, including teachers.

Knowledge exists in the mind of knowers, and students do not develop or acquire knowledge until they can put information into an ordering which has meaning for them individually. Language is the means that students usually use to bring order and meaning to facts and experience, either by speaking or writing or by inner monologue of thought. It is largely by means of language that the school expects learning to take place.

One of the aims of education is to help the student realize his or her full potential as a language user. Language develops in use in response to the demands put upon it by learning in different subject areas and by the business of living. The language that evolves in a particular situation is shaped by factors such as the nature of the speaker or writer and his or her audience, the relationship that exists between the two, their purposes in speaking or writing, the nature of the subject, and the medium being used. As these factors vary, so does the language which occurs; there is no such thing as an ideal or singularly correct style of language. However there is a style of language that is more appropriate than others in the context in which it is used. A student's language development is enhanced by the opportunity to use language in as wide a variety of situations as possible which call upon language to deal with an equally wide variety of tasks.

We use language in different ways for different purposes. Four of the most common, adapted from Halliday (1973), are listed below.

1. Language used for learning, that is for processing information and integrating new experience with our existing knowledge, as well as for expressing logical relationships which we perceive.
2. Language used for controlling and manipulating our environment.
3. Language used for establishing and maintaining social and personal relationships.
4. Language used for creating and exploring other worlds, that is, an imaginative or fantasy function.

These purposes are interrelated and school attempts to develop them all. All develop, as well, outside the school, and to various extents before the child begins formal schooling. In linguistic terms, what should make school different from the rest of a child's experience is the conscious attempt to develop the use of language for learning. No teacher can ignore language and its use. Their teaching and students' learning are primarily linguistic processes.

Through language we acquire most of our learning. Methods of inquiry, recording, reporting and theorizing are linguistic processes, sensitive to elements in the context in which they take place. It is in the school's power, as the context in which the learning of Required Areas of Study takes place, to facilitate or hinder the process, for it is through language use for clearly perceived learning purposes that students acquire understanding of what a school education offers. If the school wishes, it can be a place where students' understanding of the nature of language, and their general learning, can proceed in an integrated manner through reading, writing, talking, and listening.

What Communication Across The Curriculum Is

Communication across the curriculum (CAC), in short, means two things.

1. It means that gaining power in all four language modes - speaking, listening, reading, writing - must take place in every school course at every level of schooling if this growth is to be substantive and substantial. This meaning rejects the notion that the diverse uses of language are best learned in specific skills courses.
2. CAC stresses the interrelationship of the modes: One learns to write as one learns to speak as one learns to read and listen. Each ability, therefore, improves to the extent that all are exercized. This second meaning rejects the teaching of, for example, writing or reading in isolation from each other.

Ultimately, these two meanings of CAC come together in a third, the inseperableness of language, thinking, and learning. If students are not allowed to apply the full range of their language resources in all four modes to their learning of any subject, then we as teachers stifle thought, conscious and unconscious, and so deprive students of more than the most superficial understanding (Thaiss, 1984).

The following premises undergird CAC:

1. Language - both oral and written - is the primary means of creating new knowledge as well as the means for communicating that knowledge to others. Language is verbal thinking.
2. The four language processes are interrelated and interdependent. Deficiency or growth in one may cause deficiency or growth in another. Language is balanced between the two receptive processes

of listening and reading and the two productive processes of speaking and writing.

3. Oral language - listening and speaking - is the primary language process at all levels. Students need to talk in order to organize and remember information. Systematic instruction in oral language in all subjects is as important as instruction in reading and writing.
4. Writing is the most difficult and abstract form of verbal thinking. To write clearly students must have had the opportunity to talk and to think clearly before writing and during the writing process.
5. Language is not a subject to be studied in isolation from use; it is a process of thinking that must be used if it is to be mastered. Only by using language for a variety of real purposes for a variety of real audiences can students develop language competence.
6. The purpose of language is to articulate and create meaning. Skills aid in this process; they are part of, and never separable from, language process. Workbooks and ditto sheets need to be replaced by students talking and writing about what they have heard, experienced, and read.
7. Through observing, listening, talking, and reading students' writings, teachers can find out more about the language needs of students than through testing (Buckley, 1986, p. 371).

What Communication Across The Curriculum Is Not

It is often difficult to separate CAC in terms of skills, attitudes, values, and cognitive abilities to be developed in and by students and practised by teachers and educational administrators. The focus in this

document is on the former - students - though the direct and indirect implications for educators are often made.

The second caveat is that CAC is not an adjunct of the English Language Arts curriculum; CAC neither supplements nor reinforces the English Language Arts curriculum except in the domain of Communication and Computers. The articulation between CAC as a common essential learning and English Language Arts as a Required Area of Study is the basis of a separate document.

CAC does not suggest that all teachers become language arts teachers. The main purpose of CAC is to stress how language functions and can function to enhance learning in the subject areas. CAC is not an adjunct to the English Language Arts curriculum. CAC must be implemented in all the Required Areas of Study, but the skills, attitudes, values, and cognitive abilities dealt with derive from those subject areas and not from the English Language Arts curriculum. The focus is on the principles of language, thought and cognition in enhancing the teaching and learning that occur and might occur in the subject areas.

One meaning emphatically not implied by CAC is that the content area teacher must become a specialist also in the teaching of language processes such as speech and writing. What is required is that teachers look for ways to increase and/or vary the language experiences that will help students understand and explore the subject matter and processes of the Required Area of Study.

ORGANIZATION

As previously mentioned a matrix will be used to portray the CAC scope and sequence skills, attitudes, values, and cognitive abilities

with each of the Required Areas of Study. The columns of the matrix will include the Required Areas of Study excluding English Language Arts which will be treated in a separate document.

Required Areas of Study (columns):

Mathematics

Arts Education

Health and Physical Education

Science

Social Studies

The rows of the matrix will be made up of the four major areas conventionally used to portray the language areas, namely oral communication/speaking, listening, reading, and writing, along with areas appropriate to language in the content areas, namely nonverbal communication and study skills. Within each of these broad areas there is considerable subdivision; for example within speaking distinction is made between individual abilities and activities and group abilities and activities.

The division of language processes into six major areas is one of convenience for scope and sequence charting purposes only, for in many ways the divisions are artificial. Current thinking in English education embraces the integration of the language arts, and current research demonstrates that language skills neither emerge nor develop in isolation. The current concern for the process nature of language development also stresses the need for listening and speaking in the generation phase and later the response phase of the writing process.

Within each Required Area of Study there is subdivision by division level consistent with the divisions proposed in Directions and PPP.

	MATHEMATICS			ARTS EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
LANGUAGE CONCEPT	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
SPEAKING															
LISTENING															
READING															
WRITING															
NONVERBAL COMMUNICATION															
STUDY SKILLS															

Elementary (K-5)

Middle (6-9)

Secondary (10-12)

Finally, within each cell formed by the intersection of language mode, Required Area of Study, and division level, where applicable, will appear a dotted or solid line indicating whether the language concept is to be:

... introduced

—— developed and maintained

THE ROLE OF THE TEACHER

With CAC as a Common Essential Learning all teachers at all divisions become CAC teachers in the sense that they assume the responsibility first for understanding the cognitive, social, and attitudinal inter-relationships between language and learning, and second for the structuring of a learning climate in their classes where students explore learning in the subject area through language in all modes.

Language is the major medium through which school learning, and all learning, is acquired. Language is the process of knowing and understanding a subject area, and teachers will need to examine the language demands made by their subject, in terms of teacher talk, textbook language, specialized vocabulary, and forms of expression.

Teachers in each Required Area of Study are responsible for helping students come to terms with vocabulary, structures, and forms of expression that characterize and are in ways unique to the subject area. Students need to become literate in the language of the subject area, and subject specialists are best able to do this.

Generally, teachers will need to place a great deal more emphasis on students' expressive language, oral and written, as students come to terms with learning in the subject areas. Awareness of the contextual nature of language and learning will mean that teachers will use a variety of instructional contexts such as individual, small group, whole class, pairs, and even across-age groupings to take advantage of the different language and learning possibilities.

Teachers also need to make appropriate and reasonable speaking, listening, reading, and writing demands of students. They need to be aware of what students at different ages are generally capable of doing with language in the various modes. The scope and sequence chart will provide some guidance to teachers in providing appropriate language tasks in different modes at different levels.

Also, teachers will need to provide students with opportunities for practising the language of the subject area in different modes at different levels of complexity and formality. Here the concept of audience and purpose are important; different purposes for communicating, and communicating to different audiences, demand different types of language. For example, explaining gravity to a six-year-old requires very different language than explaining gravity to seventeen-year-old peers (Marland, 1977; Prentice, 1986; Language in the Classroom Project, 1977).

The relationship between language and thought is such that thinking and language processes are an integral part of all subject areas and teachers need to model levels and types of thinking through the language they use and ask of students. Such thinking-language processes include analysis, reasoning, problem solving, synthesis, and decision making.

Questioning used by teachers and encouraged of students plays an important part in the development of thought processes and the process of inquiry. Open questions, and responses followed by requests for clarification, elaboration, extension, and evidence are important for the discursive processes that encourage thought, language, and learning.

Another major area of language use in subject area learning is through teacher help in the development of student study skills, information processing, and testing and evaluation in the subject areas. Teachers need to make students aware how and where resources are located in subject areas, and how students organize (sort, select, summarize, outline, note-take, review, preview, and report) information in subject areas with respect to purpose and audience. Teachers can also make students aware of the language demands made by, and skills required of, tests and examinations in the Required Areas of Study.

CAC has direct implications for instructional and evaluation techniques employed by students and such implications may require changes in attitudes and practices of teachers. The most successful language-and-learning practices tend to promote relatively unpressured expression, emphasizing techniques that encourage imagination and intuition.

Many traditional content area assignments such as research papers and lab reports in the secondary grades need to be reinterpreted in terms of process theory with expressive writing and classroom verbal interaction. Student journals and logs, small-group projects, student-teacher dialogues, role playing, and educational drama are devices for promoting expressive language and interaction.

Student journals of various types can be particularly powerful and

popular learning tools. In process terms journals encourage and teach expressive writing. Entries can become the grist for more formal papers, when student writing is carried through revision and editing stages with peers and others. As a learning tool, the journal provides practice for translation of reading assignments, lectures and class notes, as well as labs and other kinds of experience, into the writer's own words. Thus the journal helps to improve reading and listening comprehension (Thaiss, 1984).

Another aspect of language that needs to be acted upon by all teachers is that meaningful classroom talk and listening provide powerful learning environments. Students talking in pairs, small groups, and large groups are taking an active part is their learning. Tentative, exploratory, and inexplicit talk in small groups is the bridge from partial and emerging understanding to confident meaningful statement. Present talking is future thinking (Chilver & Gould, 1982; Sutton, 1981).

COMMUNICATION ACROSS THE CURRICULUM IN CANADA

Communication across the curriculum as a provincial curriculum undertaking has been tried in Ontario and Nova Scotia where it has been known as language across the curriculum (LAC), the term used in England where LAC originated. In 1978 the Ministry of Education for Ontario released the curriculum resource document Language Across the Curriculum to accompany the English Intermediate Division curriculum. This document assigned the school principal a special role in the development of "a consistent and positive language policy" to be "adopted by all staff members regardless of their subject fields" (p. 3). All Ontario intermediate division school staffs were to develop LAC guidelines for

their schools, and then to implement policy and monitor the results. The Ontario document borrowed heavily from the work done by the Schools Council Project, Writing Across the Curriculum 11-16, and from the National Association for the Teaching of English publication Language Across the Curriculum: Guidelines for Schools (1976). In turn, both these projects were directly influenced by the Bullock Report A Language for Life (Bullock, 1975).

Subsequent to the LAC document of 1978, the Ontario Ministry of Education (1979) produced Reading, again as a supplement to the English Intermediate Division curriculum and aimed at teachers in all subject areas. In 1982 Focus on Writing appeared as a support document to the English Primary and Junior Divisions curriculum. It contains a section on writing across the curriculum.

The province of Nova Scotia followed Ontario's direction and produced a resource document for principals and teachers entitled Language and Learning Across the Curriculum (1980) as a support document to Secondary English 7-10. Also following Ontario's direction, the Nova Scotia document empowered each school principal with "a special role in ensuring that a consistent and positive language policy is adopted by all staff members regardless of their subject field" (p. 3). The Nova Scotia and Ontario documents are identical in many aspects.

In 1978 the Nova Scotia Department of Education published Reading Across the Curriculum for grades 7-9. In this resource document reading is described as a process rather than a subject to be taught, and that all teachers involved in junior high school (middle years) education "ought to be concerned with helping students develop adequate fluency in reading" (p. 1).

During the late 1970s the Department of Curriculum and Instruction at the University of Calgary, under the leadership and guidance of Merron Chorny and James Britton respectively, developed the Language in the Classroom Project. The work of the project is captured in a series of ten booklets under the general title Language in the Curriculum Project (1977). Contrary to the Ontario and Nova Scotia approach, the Language in the Curriculum Project represented a conviction that it is the classroom teacher who is in the best position to understand the heuristic role of language in the classroom, and to assess the needs of children in schools. The Project stemmed from the view that language is central to learning, that teachers can gain insights into their work and into learning by examining the language of the classroom, and that current language theory can be the means to such insights.

At a large school division level the Edmonton Public School system has been working on LAC since about 1978, headed by the language arts supervisory personnel. Their philosophy is that every school has a language policy, whether explicit or implicit.

> The policy is reflected in what children and teachers are doing. Principals and teachers need to discuss what they believe about children, their learning and their language; what is actually going on in the school, and how they can make it better. A policy that isn't based on understanding will be quickly shelved. (Stevenson, 1984, p. 2)

The Edmonton Public Schools LAC project involved the following:

a) workshops throughout the school year with teachers on such aspects as writing in the subject areas;

b) teacher support groups who meet once per month to share ideas;

c) workshops for principals and assistant principals on all aspects of language;

d) external consultants, such as James Britton, Donald Graves, and Jerome Harste, who come more than once and for an extended period;

e) sessions for parents;

f) summer session courses for teachers at their request;

g) sponsorship of a district magazine of literature for children, and encouragement of school and district newspapers and magazines;

h) a cooperative working arrangement with the local university and full year exchanges of personnel;

i) the publication of a language working paper for distribution to all teachers and administrators.

In Alberta the Alberta Teachers' Association has undertaken LAC as a professional development project with the teachers of the province. They have issued a professional development bulletin on LAC with specific activities that a school staff might use to implement a LAC program (Alberta Teachers' Association, 1984). At least one school district (Rockyview School Division bordering the city of Calgary) has made LAC a priority project over several years. This major curriculum enterprise involves school-based projects designed to improve student learning strategies, particularly those strategies involving the use of language.

RECOMMENDATIONS

These recommendations deal with the provision of information and the implementation of CAC processes to teachers in Saskatchewan.

1. That a study be conducted to determine how much time teachers spend teaching language skills in content areas, and what particular skills are taught.

2. That a teacher information guide be produced describing CAC as a

Common Essential Learning K-12 giving the rationale and scope of CAC in the Required Areas of Study. This guide to be distributed to all Saskatchewan educators.

a) That a significant section of the information guide deal with the role of expressive talk in the classroom in a variety of contexts with examples provided in all Required Areas of Study.

b) That a significant section of the information guide deal with the role of expressive writing in the classroom in a variety of contexts for different purposes and audiences, with examples provided in all Required Areas of Study.

c) That a section of the information guide deal with the group process for language and learning.

3. That implementation of CAC as a Common Essential Learning follow the plan described in the companion paper Implementing Communication Across the Curriculum in Schools: A Common Essential Learning.

4. That all teachers in Saskatchewan be provided with an inservice program with follow-up stages annually for a period of at least three years where they participate in CAC activities in a workshop setting led by knowledgable personnel.

5. That videotape programs of CAC in classroom settings at various levels in a variety of content areas be made available for teacher inservice sessions with appropriate follow-up discussion and activity led by knowledgable personnel.

6. That a document be produced and disseminated to all educators in Saskatchewan on the implications for evaluation of student learning consistent with CAC as a Common Essential Learning in the Required Areas of Study.

7. That Saskatchewan Education attempt to solicit the professional endorsement and assistance of the Saskatchewan Teachers' Federation, the League of Educational Administrators and Directors of Saskatchewan (LEADS), the Saskatchewan School Trustees' Association, and other educational associations in order to better implement CAC in the schools of Saskatchewan.
8. That Saskatchewan Education undertake a public awareness campaign to educate parents of school children of the meaning, intent, and implications of CAC.
9. That Saskatchewan Education undertake or contract research projects to monitor the progress and success of CAC implementation at all levels in all subjects areas over a ten year period initially, consistent with the evaluation implications of Recommendation #6.
10. a) That Saskatchewan Education stress that the most effective implementation of CAC occurs at the school level where teachers identify language needs and plan and implement CAC policy to address these.
    b) That all CAC inservice activities follow the above premise.
11. a) That resource centres and the policy that encourages resource-based learning be perceived as vehicles in the implementation of CAC.
    b) That this link be acknowledged and strengthened through inservice activity.

SCOPE AND SEQUENCE

The appended scope and sequence charts portray all of the CAC skills

in each Required Area of Study and according to level. A blank in a Required Area of Study means that the skill or activity is not appropriate for that subject area or for a specific level in that subject area.

Dotted and solid lines are used to indicate that skills or activities be introduced, and developed and maintained at a particular level for each Required Area of Study.

The Bibliography following the References list contains titles of sources used in the compilation of the scope and sequence charts. These sources are in addition to the sources referred to directly in the paper and contained in the References list.

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3. Some Dimensions of Expressive Language
4. Talking, Writing and Learning
5. Students Speak Out
6. A Learning Triangle
7. The Energy of Talk
8. Language Development in the Spectator Role
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SCOPE AND SEQUENCE

LISTENING	MATHEMATICS			ARTS EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
Interpretive Listening															
1) Recall details	·····	———		·····	———		·····	———		·····	——		·····	——	
2) Recall sequences.	·····	———		·····	———		·····	———		·····	——		·····	——	
3) Make comparisons.	·····	———		·····	———		·····	———		·····	——		·····	——	
4) Organize ideas into main and subordinate relationships.	·····	———		·····	———		·····	———		·····	——		·····	——	
5) Follow complex directions.	·····	———		·····	———		·····	———		·····	——		·····	——	
6) Make generalizations from sufficient evidence and fact.	·····	———		·····	———		·····	———		·····	——		·····	——	
7) Determine cause and effect.	·····	———		·····	———		·····	———		·····	——		·····	——	
8) Predict outcomes.	·····	———		·····	———		·····	———		·····	——		·····	——	
9) Recognize themes, patterns, consistency in phenomena.	·····	———		·····	———		·····	———		·····	——		·····	——	
10) Identify the message in oral instructions given.	·····	———		·····	———		·····	———		·····	——		·····	——	
11) Restate main idea in oral messages, instructions, or questions.	·····	———		·····	———		·····	———		·····	——		·····	——	
12) Summarize instructions, suggestions, qualifications, directions, and/or procedures.	·····	———		·····	———		·····	———		·····	——		·····	——	
13) Identify main ideas in lectures, films, video productions, performances, etc.	·····	———		·····	———		·····	———		·····	——		·····	——	

····· = introduce ——— = reinforce /maintain

LISTENING	MATHEMATICS			ARTS EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
14) Identify critical issues in factual and opinionated messages in print and audio-visual media.	·····------			·····------			·····------			·····-----			·····-----		
15) Chair and summarize a meeting; take notes.	·····----			·····---			·····----			·····-			·····---		
Critical Listening															
1) Recognize speaker bias.	·····------			·····------			·····------			·····-----			·····-----		
2) Evaluate speaker competence.	·····------			·····------			·····------			·····-----			·····-----		
3) Identify explicit and/or implicit meaning or action.	·····------			·····------			·····------			·····-----			·····-----		
4) Distinguish fact and opinion.	·····------			·····------			·····------			·····-----			·····-----		
5) Distinguish between emotional and factual language.	·····------			·····------			·····------			·····-----			·····-----		
6) Evaluate evidence and reasoning.	·····----			·····---			·····----			·····-			·····---		
7) Go beyond literal meaning to discover implicit meaning.	·····----			·····---			·····----			·····-			·····---		
8) Describe various views concerning a controversial subject.	·····----			·····---			·····----			·····-			·····---		

····· = introduce (new) ----- = reinforce/maintain

2.

LISTENING	MATHEMATICS			ARTS EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
Critical Listening															
9) Identify and understand persuasion and propaganda techniques in all media.	.....	----------		.....	----------		.....	----------		.....	----------		.....	----------	
10) States difference between content and effect of a message.		.....	---		.....	--		.....	---		.....	-		.....	--

..... = introduce (new) ----- = reinforce/maintain

SPEAKING	MATHEMATICS			ARTS EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
1. Individual Abilities and Activities															
1) Language appropriate to audience and situation.	·····	-----	-----	·····	-----		·····	-----	-----	·····	-----		·····	-----	
2) Pronunciation appropriate to audience and situation.	·····	-----	-----	·····	-----		·····	-----	-----	·····	-----		·····	-----	
3) Grammar and structures acceptable and appropriate to audience and situation.	·····	-----	-----	·····	-----		·····	-----	-----	·····	-----		·····	-----	
4) Vocabulary appropriate to audience and situation.	·····	-----	-----	·····	-----		·····	-----	-----	·····	-----		·····	-----	
5) Volume appropriate to situation.	·····	-----	-----	·····	-----		·····	-----	-----	·····	-----		·····	-----	
6) Variety in pitch, volume, rate, tone, inflection.	·····	-----	-----	·····	-----		·····	-----	-----	·····	-----		·····	-----	
7) Describe the order in which an event or experience happened.	·····	-----	-----	·····	-----		·····	-----	-----	·····	-----		·····	-----	
8) Tells sequence of events of a story or process told, read or experienced.	·····	-----	-----	·····	-----		·····	-----	-----	·····	-----		·····	-----	
9) Explain how to get somewhere, do something, in sequential order.	·····	-----	-----	·····	-----		·····	-----	-----	·····	-----		·····	-----	
10) Ask questions that are open-ended.	·····	-----	-----	·····	-----		·····	-----	-----	·····	-----		·····	-----	

····· = introduce (new) ----- = reinforce/maintain

1.

SPEAKING	MATHEMATICS			ARTS EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
1. Individual Abilities and Activities															
11) Answer questions that require explanation, description, information, clarification, etc.	.....			.....			.....			.....			.....		
12) Express own response to a story, event, experience.	.....			.....			.....			.....			.....		
13) Express feelings of characters and persons in books, films, television shows.	.....			.....			.....			.....			.....		
14) Describe the opinion, idea or viewnoint of another.	.....			.....			.....			.....			.....		
15) Explain the effect of various techniques used to influence (music, loaded words, voice quality, etc.).	.....			.....			.....			.....			.....		
16) Describe/explain values to others.	.....			.....			.....			.....			.....		
17) Provide adequate explanation for personal interpretation of an author's meaning.	.....			.....			.....			.....			.....		
2. Group Abilities and Activities															
1) Clarity, refine, restate, adapt, change, give examples, make analogies, summarize a message when another does not understand.	.....			.....			.....			.....			.....		

..... = introduce (new) ----- = reinforce/maintain

SPEAKING	MATHEMATICS			ARTS EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
2. Group Abilities and Activities															
2) Explain information, observations, processes carefully and completely.	.....	-------		.....	-------		.....	-------		.....	------		.....	------	
3) Describe behaviours and events fully and completely.	.....	-------		.....	-------		.....	-------		.....	------		.....	------	
4) Express feelings, opinions, biases, prejudices, ideas.	.....	-------		.....	-------		.....	-------		.....	------		.....	------	
5) Describe behaviours of others.	.....	-------		.....	-------		.....	-------		.....	------		.....	------	
6) Compare own standards and definitions of quality, truth and justice with other standards and explain the defference.	.....	----		.....	-------		.....	----		.....	------		.....	------	
7) Give oral reports.	.....	-------		.....	-------		.....	-------		.....	------		.....	------	
8) Interview persons to acquire information to prearranged questions.	.....	-------		.....	-------		.....	-------		.....	------		.....	------	
9) Conduct telephone interviews and surveys based on an interview schedule.	.....	-------		.....	-------		.....	-------		.....	------		.....	------	
10) Present ideas in meetings and informal gatherings and respond to challenges and questions.	.....	-------		.....	-------		.....	-------		.....	------		.....	------	

..... = introduce (new) ----- = reinforce/maintain

SPEAKING	MATHEMATICS			ARTS EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
2. Group Abilities and Activities															
11) Use various organizational and audio-visual and media techniques for presenting information, assignments and reports.	.....			.....			.....			.....			.....		
12) Explain experiments or procedures, fully describe an activity or process, explain steps involved in computing a problem, etc.	.-----			.-----			.....			.....			.....		
13) Express and defend with evidence of point of view.	.----			.-----			.----			.----			.....		
14) Dramatizing.				.....			.....						.....		
15) Role playing.				.....			.....			.....			.....		
16) Simulation.				.----			.----			.----			.----		
17) Debating.	.----			.----			.----			.----			.----		
18) Panel discussion.	.----			.----			.----			.----			.----		
19) Seminars.	.----			.----			.----			.----			.----		
20) Give a persuasive speech.	.----			.----			.----			.----			.----		
21) Give a demonstration speech.	.----			.....			.....			.....			.....		
22) Give an introductory speech.	.----			.....			.....			.----			.....		
23) Make announcements.	.----			.----			.----			.----			.----		
24) Give directions.	.....			.....			.....			.....			.....		

..... = introduce (new) ----- = reinforce/maintain

READING	MATHEMATICS			ARTS EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
1. Vocabulary															
1) Interpret meaning of commonly used words encountered in reading and listening.	.....			.....			.....			.....			.....		
2) Interpret meanings of technical and specialized terms encountered in reading and listening.	-----			.....			.....			.....			.....		
3) Use common affixes (prefixes, suffixes) to determine word meaning.	.....			.....			.....			.....			.....		
4) Use meaning of a known root to determine a new word.	-----			-----			-----			-----			-----		
5) Dissect compound words to determine meaning of new words.	.....			.....			.....			.....			.....		
6) Derive definitions from context in which words are used.	.....			.....			.....			.....			.....		
7) Interpret pictures, charts, diagrams, graphs, etc. that give a clue to word meanings.	-----			.....			.....			.....			.....		
8) Use synonyms and antonyms as clues to word meaning.	.....			.....			.....			.....			.....		
9) Interpret dictionary definition by how the word functions in context (in a sentence).	.....			.....			.....			.....			.....		

..... = introduce (new) ----- = reinforce/maintain

READING	MATHEMATICS			ARTS EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
2. Comprehension and Response															
1) Analyzing and appraising what is read both critically and objectively.	·····---			·····---			·····---			·····---			·····---		
2) Responding to the imagery and power of words.	·····---			·····---			·····---			·····---			·····---		
3) Synthesizing ideas gleaned from current reading with previous knowledge and understanding.	·····---			·····---			·····---			·····---			·····---		
4) Going beyond literal meaning to figurative and hidden meaning.	·····---			·····---			·····---			·····---			·····---		
5) Interpreting allusions and figures of speech.	·····---			·····---			·····---			·····---			·····---		
6) Judges what is relevant to a topic, what should be noted and what ignored.	·····---			·····---			·····---			·····---			·····---		
7) Differentiates main and subordinate ideas.	·····---			·····---			·····---			·····---			·····---		
8) Understands sequence of ideas.	·····---			·····---			·····---			·····---			·····---		
9) Recognize errors in reasoning: False analogy Misuse of statistics Hasty generalization.	·····---			·····---			·····---			·····---			·····---		

····· = introduce (new) ----- = reinforce/maintain

2.

READING	MATHEMATICS			AESTHETIC EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
3. Strategies															
1) Skimming, reading rapidly to discover topic inclusion and organization.	.....			.....			.....			.....			.....		
2) Looking for signal phrases and key words.	.....			.....			.....			.....			.....		
3) Determining relevance and significance of information.	.....			.....			.....			.....			.....		
4) Using text aids: table of contents, introductions, headings, summaries, glossaries, appendices, index.	.....			.....			.....			.....			.....		
5) Determining text organizational patterns: chronological order, cause and effect, comparison and contrast, simple/complex, functional.	.....			.....			.....			.....			.....		
6) Makes use of italics, marginal notes, and footnotes.	.....			.....			.....			.....			.....		

..... = introduce (new) ----- = reinforce/maintain

WRITING	MATHEMATICS			ARTS EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
1. Vocabulary															
1) Use common words to express relationships.	.....	----------		.....	----------		.....	----------		.....	----------		.....	----------	
2) Use technical words to express relationships about phenomenon in the natural, social and symbolic worlds.		.....	-------		.....	-------		.....	-------		.....	-------		.....	-------

..... = introduce (new) ----- = reinforce/maintain

1.

WRITING	MATHEMATICS			ARTS EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
2. Development of Ideas															
1) Create original descriptions.	.....	----------		.....	----------		.....	----------		.....	----------		.....	----------	
2) Create dialogue as part of writing.	.....	----------		.....	----------		.....	----------		.....	----------		.....	----------	
3) Create characters.				.....	----------		.....	----------		.....	----------		.....	----------	
4) Create plots.				.....	----------		.....	----------		.....	----------		.....	----------	

..... = introduce (new) ----- = reinforce/maintain

WRITING	MATHEMATICS			ARTS EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
3. Organization of Ideas															
1) Describe the characteristics of observed phenomena.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
2) Report an event by telling who, when, where, what, under what conditions.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
3) Tell how to do something or go somewhere.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
4) Retell in own words ideas heard or read.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
5) Summarize key points, take notes.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
6) Compare items and ideas.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
7) Contrast items and ideas.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
8) Classify or group items that share a property.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
9) Analyze by ordering items in terms of size, position, or complexity.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
10) Analyze by ordering items sequentially or chronologically.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
11) Explain why or how an event or phenomenon occurred.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
12) Express feelings about an event, person, thing, or phenomenon.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	

..... = introduce (new) ----- = reinforce/maintain

3.

WRITING	MATHEMATICS			AESTHETIC EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
3. Organization of Ideas															
13) Express a preference, or a liking or disliking for something.	·····----------			·····----------			·····----------			·····-----			·····-----		
14) Express an opinion or personal belief.	·····----------			·····----------			·····----------			·····-----			·····-----		
15) Realize value of outlining for organizing ideas.	·····----			·····----			·····-----			·····-			·····-		
16) Note - taking and organization by file card.	·····-----			·····-----			·····-----			·····-			·····-		
17) Able to summarize, paraphrase, write precis and use direct quotations.	·····-----			·····-----			·····-----			·····-			·····-		
18) Distinguish between primary and secondary sources.	·····-----			·····-----			·····-----			·····-			·····-		
19) Ability to use footnotes and make up references and/or a bibliography.	·····-----			·····-----			·····-----			·····-			····-		
20) Punctuation use:															
Comma	·····----------			·····----------			·····----------			·····-----			·····-----		
Semicolon	·····----			·····----			·····----			·····-			·····-		
Bracket	·····----			·····----			·····----			·····-			·····-		
Period	·····----------			·····----------			·····----------			·····-----			·····-----		
Paragraph indentation	·····-----			·····-----			·····-----			·····-			·····-		
Slash marks for remarks	·····-----			·····-----			·····-----			·····-			·····-		
21) Headings and subheadings.	·····-----			·····-----			·····-----			·····-			·····-		

····· = introduce (new) ----- = reinforce/maintain

WRITING	MATHEMATICS			AESTHETIC EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
4. Projection of Ideas															
1) Hypothesize, predict, or guess based on data.	.....	------		.....	------		.....	------		.....	-----		.....	-----	
2) Propose generalizations that explain relationship.	.....	—		.....	—		.....	—		.....	-		.....	-	
3) Design or set forth a scheme for classifying data, taking action or planning.	.....	------		.....	--		.....	------		.....	-----		.....	-----	
4) Render a judgement and support that judgement by referring to clearly defined criteria.	.....	-------		.....	-------		.....	-------		.....	-----		.....	-----	

..... = introduce (new) ----- = reinforce/ maintain

5.

WRITING	MATHEMATICS			AESTHETIC EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
5. Composition															
1) Compose paragraphs that focus on one main topic.	.....	----------		.....	----------		.....	----------		.....	----------		.....	----------	
2) Compose paragraphs in which points develop logically.	.....	----------		.....	----------		.....	----------		.....	----------		.....	----------	
3) Use words and structures that communicate sequential relationships: first, then, after, finally.	.....	----------		.....	----------		.....	----------		.....	----------		.....	----------	
4) Use words and structures that communicate contrasting relationships: on the other hand, in this case, in that case.	.....	---		.....	--		.....	---		.....	-		.....	-	
5) Use words and structures that communicate cause and effect relationships: as a result, therefore, thus, accordingly.	.....	---		.....	--		.....	---		.....	-		.....	-	
6) Use words and phrases that communicate comparable relationships: in the same way, similarly.	.....	---		.....	--		.....	---		.....	-		.....	-	
7) Sequence a series of paragraphs so that ideas develop progressively.	.....	---		.....	--		.....	---		.....	-		.....	-	
8) Write complete sentences, avoiding run-ons and fragments.	.....	----------		.....	----------		.....	----------		.....	----------		.....	----------	

. ..... = introduce (new) ----- = reinforce/maintain

WRITING	MATHEMATICS			AESTHETIC EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
5. Composition															
9) Avoid connecting sentence thoughts with strings of coordinate conjunctions (and, but, so, then).	.....			.....			.....			.....			.....		
10) Combine thoughts using subordinating ideas.	.....			.....			.....			.....			.....		

..... = introduce (new) ----- = reinforce/maintain

WRITING	MATHEMATICS			ARTS EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
6. Products															
1) Journals	.....	-------		.....	-------		.....	-------		.....	-------		.....	-------	
2) Diaries	.....	-------		.....	-------		.....	-------		.....	-------		.....	-------	
3) Note taking	.....	-------		.....	-------		.....	-------		.....	-------		.....	-------	
4) Reports	.....	-------		.....	-------		.....	-------		.....	-------		.....	-------	
5) Requests	.....	-------		.....	-------		.....	-------		.....	-------		.....	-------	
6) Interviews (actual and imaginary)	.....	---		.....	---		.....	---		.....	---		.....	---	
7) Logs	.....	---		.....	---		.....	---		.....	---		.....	---	
8) Research reports	.....	---		.....	---		.....	---		.....	---		.....	---	
9) Newspaper (as a class activity)	.....	-------		.....	-------		.....	-------		.....	-------		.....	-------	
10) Pamphlets	.....	-------		.....	-------		.....	-------		.....	-------		.....	-------	
11) Formal essay:															
(1) Narrative	.....	---		.....	-------		.....	---		.....	---		.....	-------	
(2) Descriptive	.....	---		.....	-------		.....	-------		.....	-------		.....	-------	
(3) Expository	.....	---		.....	---		.....	---		.....	---		.....	---	
(4) Argumentative	.....	---		.....	---		.....	---		.....	---		.....	---	
12) Biography	.....	---		.....	-------		.....	---		.....	---		.....	-------	
13) Cartoons and cartoon strips.	.....	---		.....	---		.....	---		.....	---		.....	---	
14) Anecdotes and stories.	.....	-------		.....	-------		.....	-------		.....	-------		.....	-------	

..... = introduce (new) ----- = reinforce/maintain

WRITING	MATHEMATICS			ARTS EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
6. Products															
15) Letters:															
Personal	.....			.....			.....			.....			.....		
To the editor	.....			.....			.....			.....			.....		
To public officials	.....			.....			.....			.....			.....		
To imaginary people	.....			.....			.....			.....			.....		
From imaginary places and/or people.	.....			.....			.....			.....			.....		
16) Applications	.....			.....			.....			.....			.....		
17) Memos	.....			.....			.....			.....			.....		
18) Resumes and summaries	.....			.....			.....			.....			.....		
19) Poems	.....			.....			.....			.....			.....		
20) Plays	.....			.....			.....			.....			.....		
21) Dialogues and conversations	.....			.....			.....			.....			.....		
22) Telegrams	.....			.....			.....			.....			.....		
23) Editorials	.....			.....			.....			.....			.....		
24) Commentaries	.....			.....			.....			.....			.....		
25) Responses and rebuttals	.....			.....			.....			.....			.....		
26) Proposals	.....			.....			.....			.....			.....		
27) Case studies:															
School issues	.....			.....			.....			.....			.....		
Local issues	.....			.....			.....			.....			.....		
National issues	.....			.....			.....			.....			.....		
Historical issues	.....			.....			.....			.....			.....		
Scientific issues	.....			.....			.....			.....			.....		

..... = introduce (new) ----- = reinforce/maintain

WRITING	MATHEMATICS			ARTS EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
6. Products															
28) Songs and ballads	.....			.....	----------		.....	---		.....			.....	-------	
29) Reviews:															
Books (including texts)	.....	------		.....	-----		.....	---		.....	--		.....	-	
Films	.....	------		.....	-----		.....	---		.....	--		.....	-	
Unassigned reading	.....	------		.....	-----		.....	---		.....	--		.....	-	
Television programs	.....	------		.....	----------		.....	---		.....	--		.....	-	
Documentaries	.....	------		.....	-----		.....	---		.....	--		.....	-	
30) Science notes:															
Observations							.....	---		.....	------				
Reading reports							.....	---		.....	--				
Lab reports										.....	--				
31) Mathematics writing:															
Story problems	.....	-------													
Solutions to problems	.....	-------													
Record books	.....	------													
Notes and observations	.....	-------													
32) Technical reports	.....			.....			.....			.....			.....		
33) Written debates				.....	-----		.....	---		.....	--		.....	-	
34) Informational monographs	.....	-----		.....	-----		.....	---		.....	--		.....	-	
35) Radio scripts	.....	-----		.....	-----		.....	---		.....	--		.....	-	
36) Television scripts	.....	-----		.....	-----		.....	---		.....	--		.....	-	
37) Drama scripts				.....	-----		.....	---		.....	--		.....	-	
38) Puzzles and word searches	.....			.....	-----		.....			.....			.....		

..... = introduce (new) ----- = reinforce/maintain

NONVERBAL COMMUNICATION	MATHEMATICS				AESTHETIC EDUCATION				HEALTH AND PHYSICAL EDUCATION				SCIENCE				SOCIAL STUDIES			
	K-1	1-5	6-9	10-12	K-1	1-5	6-9	10-12	K-1	1-5	6-9	10-12	K-1	1-5	6-9	10-12	K-1	1-5	6-9	10-12
1. Receptive																				
1) Assess non verbal feedback or messages of listeners and adjust accordingly (i.e. speak louder, restate, clarify, etc.).	.....				.....				.....				.....				.....			
2) Recognize when word choice or structures are not understood and adjust accordingly.	.....				.....				.....				.....				.....			
3) Recognize when requests and directions are misunderstood and take appropriate verbal action.	.....				.....				.....				.....				.....			

..... = introduce (new) ----- = reinforce /maintain

NONVERBAL COMMUNICATION	MATHEMATICS				AESTHETIC EDUCATION				HEALTH AND PHYSICAL EDUCATION				SCIENCE				SOCIAL STUDIES			
	K-1	1-5	6-9	10-12	K-1	1-5	6-9	10-12	K-1	1-5	6-9	10-12	K-1	1-5	6-9	10-12	K-1	1-5	6-9	10-12
2. Expressive																				
1) Express feelings non verbally but acceptably.	.....				.....				.....				.....				.....			
2) Express thoughts non verbally.	.....				.....				.....				.....				.....			
3) Appropriate eye contact: (a) when speaking with an individual;	.....				.....				.....				.....				.....			
(b) when speaking in a small group;	.....				.....				.....				.....				.....			
(c) when speaking to a large group.	.....				.....				.....				.....				.....			
4) Facial expressions which enhance the verbal message when presenting a speech, report, reading, or telling a story.	.....				.....				.....				.....				.....			

..... = introduce (new) ----- = reinforce/maintain

STUDY SKILLS	MATHEMATICS			ARTS EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
1) Explain how and where information is/was obtained for an oral report or written report.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
2) Dictionary use: locate a word alphabetically and with guide words.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
3) Encyclopedia use.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
4) Thesaurus as a reference.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
5) Atlas use: legends, scales, symbols, keys, parallels and meridians, contours, types of maps.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
6) Almanacs as data sources.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
7) Charts, tables, graphs as data sources.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
8) Bibliographies: (a) use of (b) compile own	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
9) Handbooks and manuals as resources.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
10) Style manuals.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
11) Periodicals and periodical indexes.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
12) Newspapers as information sources.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
13) Government publications as resources.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	

The term "study skills" implies effective and independent abilities to learn by one's own efforts. Such skills need to be introduced and applied by subject areateachers in content areas.

..... = introduce (new) ----- = reinforce/maintain

STUDY SKILLS	MATHEMATICS			ARTS EDUCATION			HEALTH AND PHYSICAL EDUCATION			SCIENCE			SOCIAL STUDIES		
	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12	K-5	6-9	10-12
14) Pamphlets as resources.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
15) Audio-visual materials as resources.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
16) Test types and demands:															
(a) Essay exam	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
(b) Multiple choice	.....	-----					.....	-----		.....	-----		.....	-----	
(c) Matching	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
(d) True-False	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
(e) Short answer	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
(f) Paragraph	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
17) Understands and uses Dewey Classification System.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	
18) Understands and uses Library of Congress System.	.....	-----		.....	-----		.....	-----		.....	-----		.....	-----	

..... = introduce (new) ----- = reinforce/maintain